

2022

# MoDOT RESULTS

Safety. Service. Stability.



Missouri Department of Transportation



[www.modot.org/results](http://www.modot.org/results)

# MoDOT RESULTS

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“We work hard to deliver quality transportation projects every day.”

## SAFETY

Be Safe

Be Accountable

## SERVICE

Be Respectful  
Be Inclusive

Be Bold

Be Better

## STABILITY

Be One Team  
So we can be a  
great organization

# MoDOT Delivers Results

The Missouri Department of Transportation is focused on providing transparent measures of our progress. MoDOT delivers results through accountability, innovation and efficiency. We have developed a system of performance metrics to deliver these results while being good stewards of the state's transportation dollars.

Since 2007, MoDOT has documented more than **\$5.5 billion** in one-time or ongoing savings. This includes redirection of \$73 million in savings in 2022 to roads and bridges and \$688 million in savings to our customers. In the last 15 years, reinvestment in safety enhancements resulted in an estimated 951 lives saved. MoDOT is not afraid to make tough decisions. In 2011, we responded to Missouri's critical infrastructure needs by enacting the Bolder Five-Year direction, a plan that reduced 124 facilities, 750 pieces of equipment and 1,200 employees. Over a decade later, these actions have saved \$1.2 billion.

During FY2022, reinforced by 2.5-cent per gallon fuel tax which allowed us to match Federal funds, MoDOT met with our partners and the general public to target \$1 billion in unfunded transportation needs across the state.

MoDOT continues to re-examine all its activities from the delivery of projects for roads and bridges to daily operations. We move some of these savings into our daily operations and internal budgets to have the necessary resources and skilled, experienced employees available to meet more customer expectations. MoDOT's core values of safety, service and stability serve as our foundational pillars. MoDOT is committed to providing a safe, innovative and reliable transportation system, which is essential to Missouri's economic growth.





# SAFETY

## Addressing Unbuckled Fatalities and Distracted Driving

The lack of wearing a seat belt is a top contributing factor in fatalities and serious injuries occurring on Missouri's roadways. While a record high **88% of Missourians** are buckling up, the 12% who are not account for a majority of vehicle occupants who are killed in Missouri's traffic crashes. If all Missourians committed to buckling up, it is estimated Missouri would experience 240 fewer traffic fatalities each year.

Likewise, distracted driving is a prevalent cause of traffic crashes in the state. The most prominent cause of distracted driving is cell phone use. Not only does distracted driving increase risk for the driver and his passengers, but like impaired driving, it also extends such risks to other users of the transportation system as well as highway workers.

"The Buckle Up Phone Down program helps us reinforce the two easiest and most effective ways to stay safe and save lives on our highways," said Nicole Hood, state highway safety and traffic engineer. "We are asking everyone to embrace and commit to these two simple actions and do your part to move Missouri toward zero traffic deaths." Since the program began in 2017, the BUPD initiative has spread steadily across Missouri and into more than a dozen other states, including Wisconsin, Massachusetts, Kentucky, Nevada, and others.



## Reduction in Injuries

### Observations, Near Misses, Close Calls

The implementation of Observations, Near Misses and Close Calls provides a reporting system for all employees to systematically reduce incidents through identifying risks that lead to injury. These programs provide the eyes and ears to identify and fix issues before an incident occurs.

MoDOT's new safety dashboard has led to unprecedented success in increasing participation in its safety observation program in the first three months. The program focuses the following three leading indicators:

- Observations = 300% increase!
- Near Misses = 675% increase!
- Good Catches = 880% increase!

# RESULTS



## SAVING LIVES

### KEEPING ALL TRAVELERS SAFE

#### **\$1.7 Billion in Safety Benefits, 140 Lives Saved**

The Smooth Roads Initiative and Better Roads, Brighter Future programs were back-to-back efforts that improved 5,600 miles of highways. Completed earlier than scheduled, the efforts delivered smoother pavement, brighter striping, rumble stripes and other safety improvements to the highways that carry 76% of Missouri's traffic. These improvements have resulted in more than **\$1.7 billion** of safety benefits to customers since 2007.



## SAFER ROADS

### SAFETY COMMITMENT

#### **\$7.1 Billion in Total Customer Savings, 656 Lives Saved**

To improve roadway safety, MoDOT has provided treatments on roadways to address "run-off-the-road" crashes. By installing thousands of miles of shoulders and rumble strips on rural highways, MoDOT has reduced severe crashes by 30%. Guard cable is used on portions of interstates and other major routes, drastically reducing the number of median crossover crashes, which are often fatal. Also, high-grip surface treatments have achieved a 20% reduction in run-off-the-road crashes and help hold vehicles in the driving lanes. Electronic truck screening allows prequalified trucks to safely bypass weigh stations.



## SAFER DESIGN CONCEPTS

### STATE-OF-THE-ART DESIGN

#### **\$686 Million in Total MoDOT Savings, 89 Lives Saved**

The Diverging Diamond Interchange (DDI), first used in Springfield, Mo., in 2009, solves major traffic and safety issues at a much lower cost than traditional interchange designs. Missouri now has 25 DDIs. Many other states have followed suit, with at least one DDI of their own. J-Turns are a cost-effective alternative to an overpass on four-lane highways and reduce the number and severity of crashes. At locations where J-Turns are installed, crashes are down 25% and there are **88% fewer fatalities**. Missouri also uses shared four-lane highways that feature alternating passing lanes to give motorists periodic opportunities to pass without pulling into the opposing lane.



## PUBLIC SAFETY

### FEDERAL GRANTS HELP IMPROVE RAIL SAFETY

MoDOT has received two grants from the United States Department of Transportation Consolidated Rail Infrastructure and Safety Improvement Program for a combined amount of **\$13.1 million**. These grants will be used to improve safety along railroad corridors in Southwest Missouri. The safety improvements include installation of lights and gates at four railroad crossings, the construction of one railroad overpass and the construction of connecting roads that will allow nine public railroad crossing closures and four private railroad crossing closures. In addition to the grants, funding for the project includes **\$2.3 million** from the railroad, **\$1 million** of local money and **\$5.3 million** of funding available to MoDOT dedicated specifically for railroad safety projects.

# SERVICE

## Safety Management System Ushers in New Level of Safety Awareness

MoDOT's Safety Culture continually works toward a goal of **zero** injuries. This year, Safety and Emergency Management, along with the MoDOT Management System (MMS) team, created the Safety Management System (SMS) module, a program that would move MoDOT into a new era of safety awareness and improved reporting methods.

The award-winning MoDOT Management System gave the perfect platform to add the new Safety module. MoDOT maintenance employees are required to use MMS to see critical safety data, report when involved in an incident, when conducting Safety Observations and reporting Good Catches or Near Misses.

The safety program was released in two phases. Phase 1 implemented a variety of dashboards from every MoDOT department. Phase 2 focused more on a standardized process for everyone to report incident data and safety observations.

With the broader purpose of the program, MoDOT rebranded MMS as the MoDOT Management System. The new safety section of MMS will help to put safety information at the forefront every day.

Now all MoDOT employees will be able to submit reports on an incident into a single data entry process within MMS, both vehicular and/or employee injury.

The new dashboard will put critical safety data at every employee's fingertips. It will also standardize and simplify the reporting process, which will lead to improved data to use for predictive analysis.

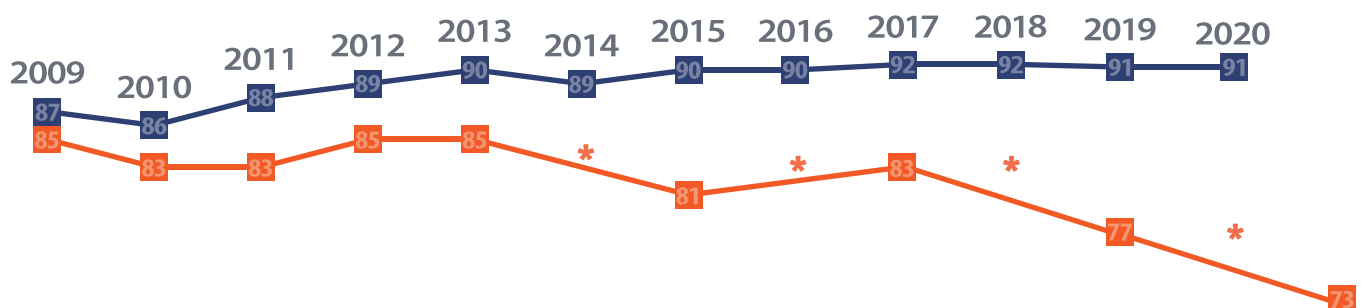
The safety dashboard will provide a location to consolidate training records, licenses, and certifications, and provide an overview of information for leadership, and the new individual components will help employees and supervisors report and access information all in one consolidated place.

## Road Condition and Customer Satisfaction

■ % Major Highways in Good Condition

■ % Overall Customer Satisfaction

\* Survey not conducted for these years.



# RESULTS



## PRACTICAL OPERATIONS

### CUSTOMER PRIORITIES

#### **\$436 Million in Total MoDOT Savings**

MoDOT has saved \$436 million since 2007 by adjusting mowing and striping schedules, using innovative materials and equipment to fight ice and snow, re-evaluating our snow route priorities and using incarcerated crews. These savings have been redirected back into improving the conditions of Missouri's roads and bridges.



## IMPROVED MODES

### NEW AMTRAK COACHES IMPROVE SAFETY, ACCESSIBILITY

#### **Improvements boost ridership, provide cost savings**

The Missouri River Runner received the new Venture passenger coaches in May 2022. The new coaches provide improved safety, accessibility, and comfort with wider aisles, larger restrooms, video display boards and audio announcements on arrivals, departures and safety messages. This has improved service to passengers, provides a cost savings to Missouri, and increased ridership and fare revenue.



## INNOVATIVE CONTRACTING

### INNOVATIVE PROCUREMENT

#### **\$638 Million Redirected to Roads and Bridges**

MoDOT uses Alternative Technical Concepts (ATC) to provide solutions that are equal or better than the original bid requirement. ATCs have been used on multiple projects since 2007. Looking to copy private-sector success, legislators authorized Design-Build project delivery. Concentrating on project goals, innovation, schedule and budget, construction is completed more efficiently, with less impact on travelers. Since 2010, Design-Build has saved \$316 million and saved 39 lives. Before design plans and construction projects are completed, they are reviewed for money-saving methods and procedures. In 2022, these engineering reviews saved **\$17.9 million**.



## STABILIZING RESOURCES

### AMERICAN RESCUE PLAN ACT FUNDS

In 2021 MoDOT received **\$15 million** in funding from the American Rescue Plan Act. This multimodal funding was spread across the four modes with rural transit receiving the bulk at \$9.2 million. Rural transit is often the only way people have to get to their doctor and other personal appointments. Aviation received \$2.2 million in funding to go toward airport operational assistance. Intercity Bus Service received \$2.8 million and \$851,000 went to Mobility for seniors and individuals with disabilities.

# STABILITY

## Addressing Unfunded Needs

Before the passing of Senate Bill 262, MoDOT and its partners had identified \$1 billion in immediate high-priority, unfunded annual transportation needs. With the passing of the fuel tax, a portion of these needs can now be addressed in every region of the state. MoDOT staff have worked with metropolitan planning organizations and regional planning commissions and the general public across the state to develop a list of high priority unfunded road and bridge needs.

These include:

- \$115 million     Improve Bridge Conditions
- \$60 million     Improve Road Conditions
- \$105 million    MoDOT Maintenance and Operations
- \$300 million    Invest in Projects That Increase Economic Growth and Improve Safety
- \$325 million    Major Interstate Reconstruction
- \$95 million     Improve Multimodal Transportation Options

Across the state, feedback from Missourians consistently prioritized maintaining the existing system as the highest priority, so most taxpayer dollars for transportation are invested in asset management projects.

In the fall of 2021, MoDOT staff worked with metropolitan planning organizations and regional planning commissions throughout the state to develop a list of high priority unfunded road and bridge needs. Since transportation needs greatly outweigh funding available, the challenge was determining the optimal projects to fund that provide the greatest return on investment to taxpayers.

The approved Unfunded Needs list in January 2022 included **\$4.5 billion** of road and bridge projects can be organized in three tiers.

- TIER 1**     \$528 million and includes projects we could accomplish in the time of the current five-year Statewide Transportation Improvement Program (STIP) as federal and state funding levels increase.
- TIER 2**     \$2 billion and includes projects beyond the current STIP timeframe with broader estimates.
- TIER 3**     \$2.2 billion of projects that are also beyond the current STIP timeframe with broader estimates.

In addition, MoDOT staff worked with the planning partners to identify \$1 billion in multimodal needs, plus nearly \$4 billion identified statewide unfunded needs primarily focused on improving Interstate 70.

MoDOT will continue to work with the regional planning partners to address as many of these needs as funding allows. Every Fall, MoDOT will host Unfunded Needs public meetings to revised this list to prepare for the Statewide Transportation Improvement Program update each spring.



# RESULTS

## MANAGING ASSETS

### TAKING CARE OF OUR SYSTEM

#### \$43.6 Million in Total MoDOT Savings

With 33,825 miles of state highway to manage, taking care of our signs and signals is a big challenge. By reassessing our road sign needs, modifying sign design and installations, converting signal and roadway lighting to LED, merging multiple software contracts into one and scrutinizing every aspect of traffic signal design and operation, **\$43.6 million** is sent back over time to take care of our system.

## FINANCIAL SUCCESS

### COMPETITIVE FEDERAL DISCRETIONARY GRANTS FUND

Federal discretionary grants have infused much-needed funding into Missouri's transportation system several times over the last decade. These competitive grants are awarded to states who show a project has national or regional significance in the improvement of safety, efficiency, and the movement of freight and people in and across rural and urban areas. Since 2009, MoDOT has been awarded **\$189 million** in Competitive Federal Discretionary Grants. MoDOT's largest such grant was the **\$81.2 million** INFRA Grant award in 2019 for the Lance Corporal Leon Deraps I-70 Missouri River Bridge near Rocheport, a project vital to both Missouri and the nation.

## FINANCIAL STABILITY

### FINANCIAL RESPONSIBILITY

#### \$1.8 Billion in Funding from Partners and State Property Leasing and Sales

Communities contribute to state highway projects to receive needed upgrades faster. If custom, decorative work is desired, those costs are also contributed. In the last 15 years, locals shared **\$1.7 billion** in additional local or federal funding to MoDOT projects and, by managing our right-of-way, put **\$64 million** to roads and bridges.

## EMBRACING TECHNOLOGY

### USING TECHNOLOGY TO DELIVER PROJECTS

#### \$26.2 Million in Total MoDOT Savings

Using Light Detection and Ranging (LiDAR) technology to streamline survey costs, LiDAR instruments are used to deliver needed topographical data to highway designers to create roadway plans. This method allows for safer, faster and more accurate collection of data on a large scale and is shown to be 56% less expensive than traditional aerial and land survey. Since implementing in 2007, this technology has saved taxpayers **\$13.8 million**. MoDOT has been a pioneer in embracing this technology and expanding the program each year. MoDOT won the 2018 and 2019 ACEC Engineering Excellence Grand award in partnership with their consultant.

# RESULTS



## DELIVERING RESULTS

We continue to complete projects on budget and on time.

State Fiscal Year 2022 522 projects completed	4.3% under budget 98% completed on time.
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Over the last 10 years 4,430 projects worth \$10.8 billion completed	5.9% (\$678 million) under budget 93% completed on time.
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DBE Contracts for Federal Fiscal Years 2019-21: \$279 million of \$2.45 billion total construction payments

## Building the future

The year 2022 saw the Missouri Department of Transportation make headway on several major projects.

The FARM Bridge Program (Fixing Access to Rural Missouri) made great strides with the completion of five rural bridges and another seven nearly complete. When finished in 2023, the program will replace 31 rural bridges in northern Missouri thanks to a \$20.8 million grant from the Federal Highway Administration and \$5.2 million from MoDOT. The program targets rural bridges that are weight-restricted, in poor condition, on timber pile or have one-lane but carry two-way traffic

In Kansas City, construction of the new Route 169 Buck O'Neil Bridge continued, with girder settings taking place throughout the year and a retaining wall being constructed on I-35 below Case Park. The project broke ground on June 23, 2021, with construction beginning in July of that year.

The bridge connects downtown Kansas City and interstate routes with the communities north of the river and sees upwards of 50,000 vehicles per day.

Construction is scheduled for completion in December of 2024 at a cost of \$220 million.

On the opposite side of the state, the I-270 North Design-Build Project continues to bring much needed improvements along Interstate 270 North from James S. McDonnell Boulevard to Bellefontaine Road in St. Louis. This year saw the removal of existing exit ramps to make way for new construction as well as the demolition of the old Lindbergh Boulevard Bridge over I-270.

The \$278 million project will bring reconstructed interchanges and additional driving lanes to help alleviate congestion, improved accessibility for bicyclists and pedestrians, an improved outer road system and improved bridges. The project kicked off on April 20, 2022 and finishes Dec. 1, 2024.

Tying interstate travel together is the Lance Corporal Leon Deraps I-70 Missouri River Bridge at Rocheport. The project, which includes two new bridges in place of the old one, saw a flurry of activity throughout the year with girder placement, median construction and the placement of piers for the new bridges.

The approximately \$240 million project will provide twice the width of the existing bridge once complete and will have a lifespan of 100 years.

## For More Information

### ADDITIONAL INFORMATION

Citizens Guide to Transportation Funding in Missouri

[www.modot.org/guidetotransportation/](http://www.modot.org/guidetotransportation/)

*TRACKER*: Measures of Performance

[www.modot.org/about/Tracker.htm](http://www.modot.org/about/Tracker.htm)

Appendices and Additional Documents

[www.modot.org/Results/Documents.html](http://www.modot.org/Results/Documents.html)

“Innovation is woven into MoDOT’s culture  
and is embraced by our partners.”



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